

AMENDMENTS TO THE CLAIMS

The Listing of Claims will replace all prior versions and listings of claims in the present patent application:

Listing of Claims

1. – 15. Cancelled.

16. (Currently Amended) A method of providing wireless communication service coverage, the method comprising:

passing communications traffic for a mobile terminal from a base station controller to a mesh of RF-coupled radio base stations;
routing the communications traffic for said mobile terminal through one or more intervening radio base stations in said mesh as needed to reach a serving radio base station;
transmitting the communications traffic for said mobile terminal from said serving radio base station to said mobile terminal;
receiving communications traffic from said mobile terminal at said serving radio base station; and
routing the communications traffic from said mobile terminal from said serving radio base station through one or more intervening radio base stations in said mesh as needed to reach said base station controller;
determining the RF coupling between respective ones of said radio base stations comprising said mesh at a central network manager;

generating routing information at said central network manager based on said
determined RF couplings; and
distributing said routing information to said radio base stations comprising said
mesh.

17. (Original) The method of claim 16 further comprising:
configuring each radio base station in said mesh as an IP-addressable routing
node; and
transporting the communications traffic to and from said mobile terminal through
said routing nodes in said mesh as IP-based packet data.
18. (Original) The method of claim 17 further comprising determining a route
through said mesh for packet data comprising the communications traffic associated
with said mobile terminal based on the relative amount of additional communications
traffic associated with other mobile terminals being routed by individual ones of said
radio base stations in said mesh.
19. (Original) The method of claim 17 further comprising dynamically updating
said route based on changing communications traffic load conditions at said radio base
stations in said mesh.
20. (Original) The method of claim 17 further comprising dynamically updating
said route based on detecting malfunctioning radio base stations within said mesh.

21. (Original) The method of claim 17 further comprising:
organizing said communications traffic as IP-based packet data; and
routing said communications traffic through said mesh based on IP addressing
information contained in IP packet data headers.
22. (Original) The method of claim 16 further comprising:
maintaining routing tables in each said radio base station in said mesh; and
routing communications traffic through said mesh based on said routing tables.
23. (Original) The method of claim 16 further comprising communicatively
coupling said mesh to said base station controller through a concentrator that carries
the aggregate of communications traffic passing between said mesh and said base
station controller.
24. (Original) The method of claim 23 wherein communicatively coupling said
mesh to said base station controller through a concentrator comprises RF coupling said
concentrator with at least one said radio base station in said mesh such that other said
radio base stations can relay communications traffic through said at least one said radio
base station communicatively coupled to said concentrator.
25. (Original) The method of claim 23 further comprising coupling said mesh to
said base station controller through at least two said concentrators, such that the

aggregate of communications traffic may be split between said at least two concentrators.

26. (Original) The method of claim 23 further comprising positioning said concentrator to maximize the number of radio base stations within said mesh with which said concentrator can communicatively couple.

27. Cancelled.

28. (Original) The method of claim 27 wherein said mesh of radio base stations carries communications traffic associated with a plurality of mobile terminals and further comprising:

observing relative communications traffic loading between respective ones of said radio base stations comprising said mesh; and
updating said routing information in one or more of said radio base stations based on said relative communications traffic loading.

29. (Original) The method of claim 27 further comprising:
determining neighbor lists for individual ones of said radio base stations in said mesh identifying adjacent radio base stations in said mesh; and
providing said neighbor list information to said individual ones of said radio base stations.

30. (Original) The method of claim 27 wherein determining the RF-coupling between respective ones of said radio base stations comprising said mesh at a central network manager comprises evaluating RF signal strength for mesh interface signaling as reported between proximate ones of said radio base stations.

31. – 53. Cancelled.